Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-20 are pending in the application, with 1, 12 and 17 being the independent claims. Claims 1-4, 12-14, 16, and 17 are sought to be amended. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Claim Objections

The Examiner objected to claims 2-4, 13, 14, 16, and 17-20 because of language informalities. Claims 2-4, 13, 14, 16, and 17 have been amended per the Examiner's suggestions for the purposes of consistency. Therefore, Applicants respectfully request the objections to claims 2-4, 13, 14, 16, and 17-20 be withdrawn.

Rejections Under 35 U.S.C. § 102

The Examiner rejected claims 1-4, 6, 8-14, and 16-19 under 35 U.S.C. § 102(b) as being anticipated by CS4205 (CrystalClear Audio Codec '97 product information document, hereinafter "CrystalClear"). Applicants traverse the rejection of claims 1-4, 6, 8-14, and 16-19 because the cited reference fails to disclose, teach, or suggest all of the features of the claimed invention.

For example, the cited reference fails to disclose, teach, or suggest a method for communicating audio, wherein the first signal line and the second signal line are sufficient for communicating audio, as recited in claim 1. Claims 12 and 17 recite

similar features. These features are discussed, for example, in Applicants' specification in paragraphs 0025-0030, and are illustrated in FIGs. 2-3.

In CrystalClear, however, "all communication with the CS4205 is established with a **5-wire** digital interface to the controller called the AC-link" (see section 2.1, page 13). That is, in CrystalClear, 5 lines are present for communication. This is illustrated in Fig. 7. Also, "all clocking for the serial communication is synchronous to the BIT_CLK," and the "BIT_CLK is generated by the primary audio codec and is used to clock the controller and any secondary audio codecs" (see section 2.1, page 13).

More specifically, CrystalClear teaches of a 5 line digital interface, and at least three of these wires are necessary for proper transmission. Because the CS4205 audio codec generates its own clock signal and all communication is synchronous with this clock signal, the CS4205 audio codec must transmit this clock signal, BIT_CLK, to all relevant components.

Taking the controller first as an example, and assuming it does not require any data input to output data, SDATA_OUT and SYNC are the other two necessary signal lines. SDATA_OUT may send data to the CS4205 audio codec, however the data is meaningless unless the CS4205 audio codec knows what type of data is being sent. The SYNC line then is necessary, as it sends a high or low signal to indicate the type of data. If the opposite assumption is made, that the controller needs data input to output data, then four lines are necessary, as the audio codec also needs to transmit data via SDATA_IN to the controller. Neither case satisfies the claimed limitations.

Now looking at the interface between the CS4205 and the stereo DAC, at least three signal lines are necessary for audio transmission: SCLK, LRCLK, and SDOUT

(see Fig. 16). SCLK is necessary because the signal is a function of BIT_CLK, as CrystalClear states "SCLK will be 64 Fs (BIT_CLK/4)" (see section 6.4, page 55). As mentioned above, CS4205 generates BIT_CLK, therefore it must transmit the signal to other components to maintain synchronization. SDOUT is analogous to SDATA_OUT in that the line transmits data, but stereo DAC will find the data meaningless unless it is told whether the data refers to left or right channel. This is the function of LRCLK. Again, this interface does not satisfy the claimed limitations.

The interface between CS4205 and stereo ADC is similar to the interface with stereo DAC, except stereo ADC transmits data back to the audio codec via SDI1, SDI2, or SDI3 (see Fig. 16). Three lines again are still necessary, since the stereo ADC must be notified what channel data to send and for how long, the function of LRCLK, and it must be synchronized with the audio codec, the function of SCLK.

For at least these reasons, Applicants respectfully submit that claim 1 is not anticipated by CrystalClear since claim 1 recites that "the first signal line and the second signal line are sufficient for communication," whereas CrystalClear requires a minimum of 3 lines. Applicants therefore respectfully request that the rejection of claim 1 be withdrawn.

Claims 2-4, 6, and 8-11 depend from claim 1, and are patentable for at least the same reasons as discussed with claim 1, and further in view of their own respective features.

As noted above, claims 12 and 17 contain similar language as claim 1 and are therefore allowable for at least the same reasons as discussed with claim 1. Applicants, therefore, respectfully request that the rejection of claims 12 and 17 be withdrawn.

Claims 13-14, 16, and 18-19 respectively depend from claims 12 and 17, and therefore also allowable at least the reasons claims 12 and 17 are allowable, and further in view of their own respective features.

Rejections Under 35 U.S.C. § 103

Claims 5, 15, and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over CrystalClear in view of U.S. Patent No. 7.088,398 to Wolf et al. (hereinafter "Wolf"). Claim 5 depends ultimately from claim 1, claim 15 depends ultimately from claim 12, and claim 20 depends ultimately from claim 17. Wolf does not overcome all of the deficiencies of CrystalClear relative to claims 1, 12, and 17, described above. For at least these reasons and further in view of their own features, claims 5, 15, and 20 are patentable over the combination of CrystalClear and Wolf. Reconsideration and withdrawal of the ground of rejection is therefore respectfully requested.

Claim 7 stands rejected under 35 U.S.C. § 103 (a) as being unpatentable over CrystalClear in view of U.S. Patent No. 6,006,287 to Wakazu (hereinafter "Wakazu"). Claim 7 depends ultimately from claim 1. Wakazu does not overcome all of the deficiencies of CrystalClear relative to claim 1, described above. For at least these reasons and further in view of their own features, claim 7 is patentable over the combination of CrystalClear and Wakazu. Reconsideration and withdrawal of the ground of rejection is therefore respectfully requested.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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